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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/399,611	09/20/1999	GARY M. MOORE	MTEC1010	2462
23513	7590	03/23/2004	EXAMINER	
GUNNISON MCKAY & HODGSON, LLP GARDEN WEST OFFICE PLAZA, SUITE 220 1900 GARDEN ROAD MONTEREY, CA 93940			BUEKER, RICHARD R	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/399,611

Applicant(s)

MOORE, GARY M.

Examiner

Richard Bueker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 22, 25-28, 35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22, 25-28 and 37 is/are allowed.
- 6) ☒ Claim(s) 1-11 and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/25/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Claims 1-7, 9-11 and 35 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Posa (4,747,367). Posa discloses a flow control system for a semiconductor processing unit comprising plural MFCs 54a and 54b at a first location, and a semiconductor processing unit at a second location. A gas manifold 100 (Fig. 2) is attached to the semiconductor processing unit and it includes within it plural manifolds including a gas supply manifold 116 to supply gas to process chamber 16, and gas vent manifolds 115 and 122 to supply gas to vent chamber 18. Gas flow paths from the MFCs are connected to the manifold body 100 via ports 106 and 108. Three-way valve members 112 and 120 are located between the inlet ports 106, 108 (and thus the MFCs 54a and 54b) and the manifolds 115, 116 and 122. Posa (col. 5, lines 1-5) also teaches the use of plural precursor gas sources and associated valves in addition to the gas sources illustrated in Fig. 2. Regarding the gas manifold exhaust valves recited in claims 2, 4 and 5, it is noted that Posa's three-way switching valves function both as gas manifold inlet valves for inlet manifold 116 and as gas manifold exhaust valves for vent manifolds 115 and 122. Posa does not discuss the use of a support structure to support the semiconductor processing unit and its attached manifold body, but such would be inherent or at least obvious.

Applicant has now amended claims 1-11 and 35 to add the new limitation of "and a process gas supply line coupled to an outlet port of said gas manifold". It is noted, however, that Posa at col. 8, lines 3-8 teaches that his Fig. 2 embodiment can be connected to a reactor in the manner illustrated in Fig. 5, which would include the process gas supply line illustrated in Fig. 5 being coupled to the outlet port 117 of the

gas manifold 116. Also, Fig. 5 specifically illustrates Posa's Fig. 4 embodiment as being connected to the vertical reactor of Fig. 5, and Posa's Fig. 4 embodiment also contains all of the gas flow control system structure recited in claims 1-7, 9-11 and 35, in a manner analogous to that of Posa's Fig. 2 embodiment discussed above.

Claim 8 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Posa taken in view of Laxman (5,492,736), who describes (col. 5, lines 54-67 and col. 7, lines 44-46) the conventional use of gas cabinets to house toxic chemical sources away from a clean room. It would have been obvious to one skilled in the art to utilize a conventional gas cabinet as described by Laxman to house the gas sources illustrated in Fig. 1 of Posa.

Applicant has argued that Posa refers to element 116 of his Fig. 2 as a process path rather than a gas supply manifold. It is noted, however, that the path 116 of Posa is inside a manifold that defines the path.

Claims 22 and 25-28 and 37 are considered allowable over the prior art of record which does not disclose or suggest a mixer and check valve arrangement for supplying semiconductor source gases as disclosed and claimed by applicant.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (703) 308-1895. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Richard Bueker*

Richard Bueker  
Primary Examiner  
Art Unit 1763